Complete Summary

GUIDELINE TITLE

Practice parameter for the assessment and treatment of children and adolescents with schizophrenia.

BIBLIOGRAPHIC SOURCE(S)

American Academy of Child and Adolescent Psychiatry. Practice parameter for the assessment and treatment of children and adolescents with schizophrenia. Washington (DC): American Academy of Child and Adolescent Psychiatry; 2000 Jun 6. 40 p. [125 references]

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COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Schizophrenia

GUIDELINE CATEGORY

Diagnosis
Evaluation
Treatment

CLINICAL SPECIALTY

Family Practice
Pediatrics
Psychiatry

INTENDED USERS

Advanced Practice Nurses
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

To provide recommendations for the assessment and treatment of schizophrenia in children and adolescents

TARGET POPULATION

Children and adolescents with schizophrenia

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnostic Assessment

1. Psychiatric assessment including family and child/adolescent interview, review of past records, symptom evaluation, complete history, and mental status examination
2. Physical assessment including exclusion of general medical causes of psychiatric symptoms and potential organic conditions, physical examination, neuroimaging, electroencephalographs, laboratory tests, and toxicology screens, as indicated
3. Psychological assessment including personality tests and projective tests, intellectual assessment, and cognitive testing
4. Identification of phase of schizophrenia
5. Diagnosis of schizophrenia using the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) or International Classification of Diseases (ICD-10) criteria

Treatment

1. Psychopharmacology:
    a. Typical neuroleptics including haloperidol, loxitane, thiothixene, and thioridazine
    b. Atypical neuroleptics including clozapine, risperidone, olanzapine, and quetiapine
    c. Other medication such as lithium, benzodiazepines, and anticonvulsants
2. Psychosocial therapies including ongoing education about the illness, social skills training, strategies to improve family functioning, problem-solving and communication skills, relapse prevention, and psychoeducational therapy
3. Electroconvulsive therapy (ECT)

MAJOR OUTCOMES CONSIDERED

- Accuracy of diagnosis based on diagnostic criteria and other diagnostic instruments
- Symptoms of schizophrenia
- Morbidity
- Partial and complete remission rates
- Relapse rates
- Medication side-effects

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The literature review process was performed using the National Library of Medicine Medline database. Key words included: adolescents, children and schizophrenia, with other topics (e.g., specific medications) also examined over time. The initial Medline search covered a 5-year period dating back to 1988, and has been periodically updated, most recently in December 1999. Relevant papers identified through this process were reviewed in detail. Pertinent papers published prior to the period covered in the literature search were also reviewed, as were review articles regarding adult-onset schizophrenia. Finally, the authors drew from their own work in this area.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The validity of scientific findings was judged by design, sample selection and size, inclusion of comparison groups, generalizability, and agreement with other studies

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Clinical consensus was determined through extensive review by the members of the Work Group on Quality Issues, child and adolescent psychiatry consultants with expertise in the content area, the entire Academy membership, and the Academy Assembly and Council.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

[MS] "Minimal Standards" are recommendations that are based on substantial empirical evidence (such as well controlled, double-blind trials) or overwhelming clinical consensus or legal and regulatory requirements. Minimal standards are expected to apply more than 95 percent of the time, i.e., in almost all cases. When the practitioner does not follow this standard in a particular case, the medical record should indicate the reason.

[CG] "Clinical Guidelines" are recommendations that are based on empirical evidence (such as open trials, case studies) and/or strong clinical consensus. Clinical guidelines apply approximately 75 percent of the time. These practices should always be considered by the clinician, but there are exceptions to their application.

[OP] "Options" are practices that are acceptable, but not required. There may be insufficient empirical evidence to support recommending these practices as minimal standards or clinical guidelines. In some cases they may be indicated, but in other cases should be avoided. If possible, the practice parameter will explain the pros and cons of these options.

[NE] "Not Endorsed" refers to practices that are known to be ineffective or contraindicated.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The literature review was incorporated into the initial drafts of this manuscript, which was distributed to a panel of experts. Their comments were incorporated into the manuscript, including additions and clarifications of the literature review.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendations are identified as falling into one of four categories of endorsement. These categories, which are defined at the end of the "Major Recommendations" field, indicate the degree of importance or certainty of each recommendation.

The following recommendations should be considered in the assessment and treatment of schizophrenia in children and adolescents.

Assessment

Psychiatric Assessment

A comprehensive diagnostic assessment is needed [MS]. This should include, when possible, interviews with both the child or adolescent and the family, plus a review of past records and any other available ancillary information. The assessment should include a detailed evaluation of the psychotic symptoms that are required for the diagnosis. Issues to address include:

- Symptom presentation
- Course of illness
- Other pertinent symptoms and/or confounding factors, including any history of significant developmental problems, mood disorders or substance abuse
- Family psychiatric history, with a focus on psychotic illnesses
- Mental status examination, including clinical evidence of psychotic symptoms and thought disorder

Physical Assessment

General medical causes of psychotic symptoms should be ruled out [MS]. Potential organic conditions that need to be considered include acute intoxication, delirium, central nervous system lesions, tumors or infections, metabolic disorders, and seizure disorders. A thorough physical examination is needed. Other tests and procedures, such as neuroimaging, electroencephalographs, laboratory tests, and toxicology screens, should be ordered as indicated based on the history and physical examination. In addition, some laboratory testing, such as assessing renal or hepatic functioning, may also be indicated for monitoring potential adverse-effects of psychopharmacologic agents. Finally, some cases may require consultation with other medical specialties.

Psychological Assessment

Psychological testing, including personality and projective tests, is not indicated as a method of diagnosing schizophrenia. An intellectual assessment may be indicated when there is clinical evidence of developmental delays, since these deficits may influence the presentation and/or interpretation of symptoms [CG]. Cognitive testing also may be useful for assessing the degree of impairment associated with the illness, and to help guide treatment planning [OP].

Phases of Schizophrenia

In order to adequately diagnosis and treat individuals with schizophrenia, clinicians must be able to recognize the various phases of the disorder [MS]. These phases include:

- Prodrome. Prior to developing overt psychotic symptoms, most individuals will experience some period of deteriorating function, which may include social isolation, idiosyncratic or bizarre preoccupations, unusual behaviors, academic problems and/or deteriorating self-care skills. However, while the presence of these problems should raise concerns, psychotic symptoms must be present before a diagnosis of schizophrenia can be made.
- Acute Phase. This is the phase in which patients often present, and is dominated by positive psychotic symptoms (i.e., hallucinations, delusions, formal thought disorder, bizarre psychotic behavior) and functional deterioration.
- Recovery Phase. This follows the acute phase, as the active psychosis begins to remit. This phase often has some ongoing psychotic symptoms, and may also be associated with confusion, disorganization and/or dysphoria.
- Residual Phase. During this phase, positive psychotic symptoms are minimal. However, patients will still generally have ongoing problems with "negative symptoms", i.e., social withdrawal, apathy, amotivation, and/or flat affect.
- Chronic Impairment. Some patients remain chronically impaired by persistent symptoms that have not responded adequately to treatment.

Psychiatric Formulation

A diagnosis of schizophrenia is made when the prerequisite Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) (or International Classification of Diseases [ICD-10]) symptoms are present for the required duration, and other disorders have been adequately ruled out [MS]. The differential diagnosis includes mood disorders (especially psychotic symptoms associated with mania or mixed episodes of bipolar disorder), pervasive developmental disorders, non-psychotic emotional and behavioral disturbances (including posttraumatic stress disorder), and organic conditions (including substance abuse). The formulation must also incorporate other clinically significant issues, such as developmental delays and child maltreatment. Once the diagnosis is established, it needs to be reassessed longitudinally as misdiagnosis at the time of onset is a common problem.

Treatment

Adequate treatment requires the combination of psychopharmacologic agents plus psychosocial interventions [MS]. Treatment strategies may vary depending on the phase of illness. Therapeutic recommendations are primarily based on the adult literature, since there is a lack of treatment research for youth with schizophrenia.

Psychopharmacology

Antipsychotic agents are recommended for the treatment of the psychotic symptoms associated with schizophrenia [MS]. First-line agents include traditional

neuroleptic medications (block dopamine receptors), or the atypical antipsychotic agents (that have a variety of effects, including antagonism of serotonergic receptors). Compared to traditional agents, the atypical antipsychotics are at least as effective for positive symptoms, and may be more helpful for negative symptoms. Clozapine has documented efficacy for treatment-resistant schizophrenia in adults. However, clozapine is usually not considered a first-line agent due to its significant potential adverse effects, and is generally only used after therapeutic trials of at least two other antipsychotic medications (one or both of which should be an atypical agent) [MS].

The use of antipsychotic agents requires the following [MS]:

- Adequate informed consent from the parent/youth (depending on the legal age requirements and/or legal status of the patient)
- Documentation of target symptoms
- Documentation of any required baseline and follow-up laboratory monitoring, dependent on the agent being used.
- Documentation of treatment response
- Documentation of suspected side-effects, including monitoring for known side-effects (e.g., extrapyramidal side-effects, weight gain, agranulocytosis and seizures with clozapine)
- Adequate therapeutic trials, which generally require the use of sufficient dosages over 4 – 6 weeks
- Long-term monitoring to reassess dosage needs, dependent on the stage of illness. Higher dosages may be required during the acute phases, with smaller dosages during residual phases. The decision to lower dosages (which minimizes the side-effect risks), or undergo medication-free trials, must be balanced by the potential increased risk for relapse. In general, first-episode patients should receive some maintenance psychopharmacological treatment for one to two years after the initial episode, given the risk for relapse.

Some patients may benefit from the use of adjunctive agents, including antiparkinsonian agents, mood stabilizers, antidepressants or benzodiazepines [CG]. These medications are either used to address side-effects of the antipsychotic agent or to alleviate associated symptomatology (e.g., agitation, mood instability, dysphoria, explosive outbursts). Although commonly used, there are no studies that systematically address the use of adjunctive agents in juveniles.

Psychosocial Interventions

Psychosocial interventions are recommended [MS]:

- Psychoeducational therapy for the patient, including ongoing education about the illness, treatment options, social skills training, relapse prevention, basic life skills training and problem solving skills strategies.
- Psychoeducational therapy for the family to increase the understanding of the illness, treatment options, prognosis and developing strategies to cope with the symptoms of the patient.

Specialized educational programs and/or vocational training programs may be indicated for some children or adolescents to address the cognitive and functional

deficits associated with the illness [CG). Some individuals will require more intensive community support services, including day programs. Furthermore, there are some cases where the severity and chronicity of symptoms warrants long-term placement in a residential facility. However, efforts should always be made to maintain the child or adolescent in the least restrictive setting possible.

Other Treatments

In addition to those treatments provided specifically for schizophrenia, other interventions and services may be needed to address either comorbid conditions, or associated sequelae of the disorder, such as substance abuse, depression and suicidality [CG].

There are case-reports of electroconvulsive therapy (ECT) being used for youth with treatment refractory schizophrenia. However, electroconvulsive therapy does not appear to be as effective for schizophrenia as it is for mood disorders. The use of electroconvulsive therapy should be reserved for those cases where several trials of medication therapy (including a trial of clozapine) have failed. Electroconvulsive therapy may also be considered for catatonic states [OP].

Definitions:

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Reliability and veracity of diagnosis
    - Structured interviews symptom scales, and decision trees may serve as important aids to ensure reliability and veracity of diagnosis
- Antipsychotic medications reduce psychotic symptoms, prevent relapse, and improve overall long-term functioning
- Psychoeducational interventions including strategies to improve family functioning, problem-solving, and communication skills, and relapse prevention have been shown to decrease relapse rates

POTENTIAL HARMS

1. Misdiagnosis of schizophrenia
2. Medication side-effects (Note: See the original guideline document for a more detailed discussion of side-effects)

    Conventional neuroleptics:

    - Neurologic side effects
        - Acute extrapyramidal side-effects including dystonia, parkinsonism, and akathisia
        - Late appearing extrapyramidal side-effects including tardive dyskinesia, and tardive dystonia
        - Neuroleptic malignant syndrome
    - Cognitive effects
    - Other side effects including sedation, orthostatic hypotension, weight gain, sexual dysfunction, hyperprolactinemia and lowered seizure threshold

    Clozapine:

    - Clozapine has significant side-effects that often limit its use. The two major concerns are seizures and agranulocytosis

    Atypical antipsychotic medications:

    - Potential side effects include weight gain, neurologic, cognitive, cardiac, hematological, hepatic, ocular, and other side-effects

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Practice parameters are strategies for patient management, developed to assist clinicians in psychiatric decision-making. This parameter, based on evaluation of the scientific literature and relevant clinical consensus, describes generally accepted approaches to assess and treat specific disorders or to perform specific medical procedures. These parameters are not intended to define the standard of care; nor should they be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and available resources. Given inevitable changes in scientific information and technology, these parameters will be reviewed periodically and updated when appropriate.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 Jun 6

GUIDELINE DEVELOPER(S)

American Academy of Child and Adolescent Psychiatry - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Child and Adolescent Psychiatry (AACAP)

GUIDELINE COMMITTEE

Work Group on Quality Issues

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

This parameter was developed by:

Jon McClellan, M.D., and John Werry, M.D.

Work Group on Quality Issues Members: William Bernet, M.D., Chair, Valerie Arnold, M.D., Joseph Beitchman, M.D., R. Scott Benson, M.D., Oscar Bukstein, M.D., Joan Kinlan, M.D., Jon McClellan, M.D., David Rue, M.D., and Jon A. Shaw, M.D.

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

As a matter of policy, some of the authors to these practice parameters are in active clinical practice and may have received income related to treatments discussed in these parameters. Some authors may be involved primarily in research or other academic endeavors and also may have received income related to treatments discussed in these parameters. To minimize the potential for these parameters to contain biased recommendations due to conflict of interest, the parameters were reviewed extensively by Work Group members, consultants, and Academy members; authors and reviewers were asked to base their recommendations on an objective evaluation of the available evidence; and authors and reviewers who believed that they might have a conflict of interest that would bias, or appear to bias, their work on these parameters were asked to notify the Academy.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previously released version (Practice parameters for the assessment and treatment of children and adolescents with schizophrenia. J Am Acad Child Adolesc Psychiatry 1994 Jun;33[5]:616-35.)

GUIDELINE AVAILABILITY

Electronic copies: Available (to members only) from the American Academy of Adolescent and Child Psychiatry (AACAP) Web site.

Print copies: Available from AACAP, Communications Department, 315 Wisconsin Avenue, NW, Washington, DC 20016. Additional information can be obtained through the AACAP Publication Catalog for Parameters.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. The updated guideline summary was completed by ECRI on February 12, 2002. The information was verified by the guideline developer as of May 1, 2002.

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